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Publisher: Routledge
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The Washington Quarterly
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/rwaq20

The Day After: Action Following a Nuclear Blast in a U.S. City

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Published online: 05 Jan 2010.

To cite this article: Ashton B. Carter , Michael M. May & William J. Perry (2007) The Day After: Action Following a Nuclear Blast in a U.S. City, The Washington Quarterly, 30:4, 19-32, DOI: 10.1162/wash.2007.30.4.19

To link to this article: http://dx.doi.org/10.1162/wash.2007.30.4.19

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The Day After: Action Following a Nuclear Blast in a U.S. City

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Ever since the United States lost its monopoly on nuclear weapons in 1949, the possibility of a nuclear attack on U.S. soil has been regarded as the gravest of all imaginable threats to U.S. national security. Today, nonstate terrorist actors such as al Qaeda have pledged to carry out an "American Hiroshima" of a significantly greater magnitude than the attacks perpetrated against the United States on September 11, 2001.

Armed with the recognition that prevention offers by far the best protection against nuclear terrorism, the U.S. national security establishment has long sought to ensure that nuclear weapons and fissile materials do not fall into new and threatening hands, especially those of terrorists. Through initiatives such as the Nunn-Lugar program, which has provided U.S.-funded assistance to the former states of the Soviet Union to secure and dismantle their nuclear weapons programs, Washington has led international efforts in cooperative threat reduction resulting in the deactivation of more than 7,000 nuclear warheads since 1991.

In spite of these successes, the threat of a nuclear attack against the United States has not yet been eradicated, nor has the spread of weapons of mass destruction been effectively curtailed. The serious setbacks to nuclear terrorism prevention in recent years are particularly disturbing, as evidenced by North Korea's new nuclear weapons arsenal, Iran's unchecked nuclear developments, continuing political risk in nuclear-armed Pakistan, and inadequately safeguarded weapons and fissile materials still remaining in Russia and elsewhere. Collec-

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The Washington Quarterly • 30:4 pp. 19–32.

tively, these setbacks have increased the probability that one or more terrorist groups, all of which presently lack the capability to go nuclear on their own and instead must rely on witting or unwitting government assistance, will acquire nuclear weapons or fissile materials from the governments that have them.

There is no silver bullet for planning an effective response to a nuclear attack.

It is a common refrain among policy thinkers concerned with the growing nuclear threat to frame the issue of prevention in terms of a provocative question: "On the day after a nuclear weapon goes off in a U.S. city, what will we wish we had done to prevent it?"[1] In April 2007, a group of leading federal government civilian and military officials, scientists, policy experts, and journalists convened in Washington at the invitation of the Preventive Defense Project, a research collaboration by Harvard and Stanford Universities, to ponder different questions: What will the United States actually do on the day after prevention fails? What preparations are necessary?

Recovery and Renewed Prevention

Necessary actions in the event of an attack will fall into two categories: actions to recover from the first detonation and actions to prevent a second. Among the challenges that must be addressed are emergency response, evacuation and sheltering, immediate radiation effects, follow-on threats after the first nuclear weapon, attribution and retaliation, and the long process of cleanup, especially the uniquely difficult problem of fallout and residual radioactivity.

No contingency plan, however well conceived or executed, would stop this day from being the most catastrophic single event in the nation's history and the worst possible failure of public policy. Yet, the actions of public officials on the day after will affect the lives of many thousands, the welfare of many millions, and the well-being and even cohesiveness of the nation and the world. As grim a prospect as this scenario is for policymakers to contemplate, a failure to develop a comprehensive contingency plan and inform the American public, where appropriate, about its particulars will only serve to amplify the devastating impact of a nuclear attack on a U.S. city, should such a fateful event ever take place.

During the Cold War, "thinking the unthinkable" was a fearsome task that resulted in sturdy policies such as deterrence and arms control that prevented disaster and were over time understood and accepted by the population. Today, a similar forthrightness by government is warranted as it plans to fulfill its duties on a possible day after.

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The Scenario: A Nuclear Weapon Detonates in a U.S. City

In the baseline scenario considered here, a 10-kiloton uranium fission nuclear weapon has detonated in a major U.S. city without advance warning at or about ground level, for example, in a high-rise building. A groundburst nuclear weapon would spread blast damage and fire over a smaller area than an airburst of comparable yield but would produce much more radioactive fallout.

It is easier to make an improvised nuclear weapon with highly enriched uranium than with plutonium, making it the terrorists' fissile material of choice, all other things being equal. Nonetheless, the consequences do not depend much on the type of fissile material used.

If the weapon was homemade by terrorists without extensive experimentation or testing, the first attempt would possibly and perhaps likely be a "fizzle" of lower yield. The nuclear weapon tested underground by North Korea in the summer of 2006 had a yield of one-half of a kiloton and apparently fell short of its design yield. On the other hand, a bomb stolen from the Russian stockpile could be hundreds of kilotons. The consequences described below would vary quantitatively, but not qualitatively, according to the exact yield of a terrorist bomb.

Would terrorists in possession of a nuclear weapon announce their intentions in advance? They might not for three reasons. First, catching a city by surprise would obviously increase the amount of destruction and chaos that terrorists could cause. Second, advance notice might risk having the plot foiled before it could be completed. Third, there is no reason to believe that "loose nukes" would come one at a time. Wherever terrorists got one weapon, they might have obtained several. Setting off a first bomb with no warning would still permit the terrorists to claim that more detonations were to come and to sow widespread panic, a likely tactic of terrorism, even if they had only obtained a single nuclear weapon.

For the responders, if warning did come it would present obvious opportunities to save lives but would also present dilemmas: whether to panic the population on the basis of a possible hoax, whether to negotiate with the terrorists on the basis of their demands, and whether to believe that the terrorists had multiple bombs. All these dilemmas are likely on the day after regardless of a warning, as responders will have to assume they are facing a campaign of terror and not a single detonation.

Although there are some unknowns and variations, the broad outlines of the grisly effects of a 10-kiloton groundburst are clear.[2] The downtown area, about one mile in radius, would be obliterated. Just outside the area leveled by blast, people wounded by flying debris, fires, and intense radiation would stand little chance of survival. Emergency workers would not get to them be-

cause of the intense radiation, and in any event, their burns and acute radiation exposure would require sophisticated and intensive medical care to offer any chance of survival. Further downwind from the detonation point, a plume of radioactive debris would spread. Its shape and size would depend on wind and rain conditions, but within one day, people within five to 10 square miles who did not find shelter or flee within hours would receive lethal radiation doses. This area, for example, could include Brooklyn, New York; northwest Washington, D.C.; or the upper peninsula of San Francisco.

People who were relatively close to the detonation point or who did not shelter themselves from the radiation, which would be most intense on the day of the blast and subside with time, would receive large but varying doses of radiation. If the dose was intense (more than 400 rems), they would get sick and die; if strong but moderate (50–400 rems), they would get sick but probably recover; if moderate (less than 50 rems), they would not notice the effect immediately but would have a greater chance of contracting cancer over their lifetime than if they had received no dose. Because there is little that could be done for those in the area in and around the blast zone, responders would concentrate on minimizing the radiation dose to the population further downwind and preventing chaos among the rest of the population, which would be physically unaffected but traumatized and deprived of whatever utilities and services were located in the affected area.

In the months and years following the attack, policymakers would face a trade-off in the large downwind plume area. If they allowed residents to return early, those residents would experience a higher average cancer rate later in their lives, resulting in many additional deaths when averaged over a large population. If not, or if those people were unwilling to accept a larger lifetime cancer rate, their homes would have to be abandoned. The city center itself would remain too radioactive to rebuild for a year or longer.

Planning for the Day After

There is no silver bullet for planning an effective response to such an attack. If the nation's top emergency planners are to have any conceivable hope of mitigating the severity of its impact, however, the federal government should stop pretending that state and local officials will be able to manage the situation by themselves.

Unfortunately, the pretense persists in Washington that the role of the federal government in such a scenario is to support governors and mayors, who will retain authority and responsibility in the affected area. Although this is a reasonable application of the federal system to small- and medium-sized emergencies, it is not appropriate for large disasters such as a nuclear detona-

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tion. As the fiasco after Hurricane Katrina suggests, most cities and states will quickly be overwhelmed by the magnitude of the humanitarian, law and order, and logistical challenges of responding to a nuclear blast.

Yet, this fiction persists stubbornly in the nation's preparedness bureaucracies at all levels. State and local governments guard their supposed authorities under the federal system, and Washington seeks to evade responsibility. The result so far is a failure to plan realistically. The federal government should instead plan on the basis that, in the event of a nuclear detonation, it will shoulder principal responsibility for all aspects of response.

Remarkably, such a plan does not yet exist.

On the first day after the event, of course, federal assets will not yet have made it to the scene. Shortly thereafter, however, they should plan to lead the response effort. Rather than awaiting such a determination by the president, law and regulations should stipulate that a nuclear detonation automatically triggers a full federal response. Local responders and authorities will continue to play key roles, so training and exercises should focus on cooperative responses led by the federal government but also be adaptable to the often unique local circumstances.

One might think, given the distinct possibility of a nuclear attack on a U.S. city, that the federal government would have already developed a realistic response plan specific to this scenario that marshals the resources of all the agencies. Remarkably, such a plan does not yet exist, although one is being drafted. A good plan would not guarantee a flawless federal response, but without a plan, a failure of a scope that would dwarf the failures following Katrina is certain. The plan has to assume a lead federal role in all aspects of response; must describe the fully coordinated actions of all federal agencies, including the Department of Defense; must reflect difficult choices (e.g., between evacuation and shelter-in-place); and must point the way to investments that need to be made to give the responders capabilities they currently lack.

At the very least, the government's response plan should provide for an agreed and exercised incident command structure specific to a nuclear terrorism scenario, coordinated with state and local responders and authorities. It should include provisions for maintaining or restoring communications within the command and response structure, to Washington, and to the media and public.

Contrary to some popular depictions, electronic interference with means of communication due to electromagnetic pulse in this groundburst scenario will be largely limited to the areas physically destroyed after the first few minutes.

Most media will be up and transmitting, especially if a modicum of emergency planning is in place. Access to all means to inform the public and update information is essential to limit panic and other adverse reactions. In this regard, it is crucial for responsible government officials to correct any erroneous guidance to responders and to the public as soon as they are able. Errors are certain to occur, if only because wind patterns will shift and other unforeseen events will come about. Correcting those errors promptly is necessary to maintain trust. Most media will be unaffected and communicating into the area, and they will give a platform to many uninformed sources. The government sources will have to compete with those sources successfully and in real time.

Although much of the telecommunications, internet, and mass media in the affected city will survive and operate to communicate warnings and advisories from responsible government officials to responders and the public, these can and should be augmented by an updated version of the Emergency Broadcast System, now called the Emergency Alert System. This 1950s-era system is familiar to Americans from the tone interrupting their radio and television programming followed by the announcement, "This is a test of the Emergency Broadcast System." This system and the Department of Homeland Security's (DHS) National Warning Systems connecting the DHS and other echelons of government are based on outdated technology. The DHS should receive funding to establish a new system using modern media and should take necessary measures in advance to assess and minimize its vulnerability to outages in an emergency. The modern media could include, for example, the capability to send text messages or e-mails to all citizens and equipping responders with wireless devices. A system of this sort is already in operation among the many federal and local emergency-response managers in the Washington area.[3]

In addition, the government's response plan should provide for identification of sites for temporary storage of radioactive wastes. Hospitals outside the immediate impact area in particular and other assistance sites will be dealing with contaminated clothing and other items and will not be able to operate long without facilities for temporary disposal and instructions on how to use them.

Avoiding Short-Term Radioactive Exposure

Radioactivity and radioactive fallout in particular pose a problem peculiar to nuclear terrorism. For most people in the city struck, their best bet to avoid serious radiation exposure would be to find shelter below ground for approximately three days until radiation levels had subsided and only then to evacuate the area. Mass and chaotic evacuation during the time when radiation dose rates are greatest would result in large and unnecessary loss of life over

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and above the fatalities due to the immediate blast, fire, and close-in fallout. Although in-place sheltering would be optimal for most people, it would run counter to their strong impulse to flee the area. For a comparatively few people just downwind of the detonation, moreover, sheltering would not in fact offer enough protection, and their only chance would be to leave as soon as possible, preferably before most of the fallout settles.[4]

In view of these facts, two capabilities should be fostered by the federal government. First, a new type of fallout shelter program should be promoted by the federal government as a cheap and effective way to minimize the radiation exposure of most people downwind of a nuclear terrorist attack. The Cold War civil defense shelter program was mocked because it could not offer realistic protection against an attack of thousands of warheads from the Soviet Union. Against one or a few terrorist nuclear weapons, however, in-place sheltering is the best way for most people to protect themselves. Shelters that will only be occupied for a few days do not need to be equipped with large stocks of food, water, and other supplies.

> Stop pretending that state and local officials will be able to manage the situation by themselves.

Keeping the bulk of the population off the highways immediately after the blast will also permit emergency workers and those who need to evacuate from the hot zone to move freely. A mass, confused exodus from the city will expose the fleeing population to unnecessarily high doses of radiation and impede the movement of emergency personnel. To avoid this, federal and state officials and first responders should work out plans ahead of time for determining which roads in the affected area should be closed to the public for three days and which should remain open and for how long.

Second, the federal government should provide the capability to ascertain the direction of the fallout plume from the blast so citizens can be informed of whether they are in the zone where evacuation is best or whether they should shelter in place. Models at the Department of Energy's national laboratories and the Defense Threat Reduction Agency, coupled with the daily weather forecast from the National Weather Service, can predict where the plume will drift and settle. A federal shelter-in-place program therefore should be accompanied by a rapid plume-prediction capability. It should also be accompanied by a program of education for emergency workers and the press (to the extent possible) on the effects of radiation. Even given better plans than those that now exist, putting those plans into practice will clearly be difficult and will require constantly updated communications to the public, media, and first re-

sponders. Large-scale panic could lead to subsequent loss of life on a par with that in the detonation zone itself. Experience with previous wartime catastrophes such as cities bombed in World War II shows that, with leadership and training, this unnecessary additional loss of life can be avoided.

The Trade-offs of Long-Term Radiation Exposure

A sensible approach to response, recovery, rebuilding, and decontamination after a nuclear detonation will require emergency responders and some citizens in the affected area to accept a greater exposure to radiation than is permitted by normal day-to-day occupational guidelines. This subject is sensitive because, beyond small doses, no amount of radiation exposure is entirely safe. The amount of risk varies drastically between high and low doses, however, and occupational guidelines are based on a different set of trade-offs between exposure and other risks than are appropriate to the day-after scenario. Emergency responders, health workers, and troops need to understand these trade-offs in order to accept the exposure that will be necessary for them to carry out their life-saving tasks. Citizens willing to accept added exposure will be able to move back to the fallout region and resume normal life more quickly and cheaply than those who are not.

Every person in the city bombed would have been exposed to about 0.2 rems of radiation every year of their lives from the natural environment around them. Each of them would also have on average about a 20 percent chance of dying of a form of cancer. Depending on where they are and what they do, people in the bombed city will receive a certain dose on the day of the attack and an accumulating but subsiding dose rate thereafter. If their accumulated dose in the immediate aftermath is severe, they will probably die because the specialized and elaborate medical care required to give a severe radiation exposure victim any chance of survival could only be made available to a very few people. If their dose was between a large, lethal dose and the naturally occurring exposure, however, they would survive the exposure itself but have a greater chance of getting cancer over their lifetime than they would have had if the terrorists had not bombed their city. Most would experience a less than 1 percent increase in their chances of dying of cancer; those who suffered large doses and survived would see their chances of dying of cancer increase to 30 percent; those with still larger doses would not survive. A person or policy might reasonably choose to trade-off a small increase in the average cancer rate against other factors: for a responder, the chance to save lives by entering the radiation zone; for a citizen, the chance to return home earlier.

A rational approach to the dilemmas of radiation exposure will require informed consent, which in turn depends on education. First responders and

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other personnel critical to effective recovery can and should receive education on the effects of radiation on human health. This could be done through the creation by the DHS in association with the Energy Department of a self-education Web site that emergency workers would be encouraged to visit. Many emergency workers, National Guard personnel, and others whose decisions would be critical to the overall response effort are highly motivated to carry out their professional tasks and accustomed to continuing professional education and self-training. Many of them would therefore avail themselves of such a Web site.

> Contrary to some popular depictions, most media will be up and transmitting.

A second target for education on the effects of radiation exposure would be the media. Many local and national media have one or more reporters who cover terrorism, homeland security, and disaster response. If they are educated in advance regarding radiation effects, they might be able to interpret the actions and advisories of public authorities for the public. Education of the public at large poses a more difficult problem because the public's attention will likely not be fully engaged until after an attack. It is nonetheless crucial that the government invest more resources toward educating local community leaders about immediate actions that can be taken in the aftermath of a nuclear attack. Well-trained public officials operating from a response plan whose radiation exposure aspects are calculated and communicating through a press corps that contains knowledgeable members is the best hope for informed choices by the public.

Responding to the Threat of Follow-on Attacks

If one nuclear weapon goes off, more are likely to follow. Terrorists able to get one bomb might well have a few more. Even if they only have one, they will likely claim to have more. Americans will therefore expect that the day of the attack is merely the day before the next city or cities are destroyed, and the U.S. government is highly unlikely to be able to prove otherwise.

The fact that nuclear terrorism will appear as a syndrome rather than a single episode has major consequences. If San Francisco is hit, for example, the U.S. government will be forced to conclude that Washington could be next and will have to decide whether and to what extent to relocate the government. For the same reason, residents of other cities may understandably want to evacuate their city. In short, all citizens in the country and perhaps the world will be torn between helping the city bombed and preparing for the same in their locale. Borders, ports, and airports will be closed, and a frantic

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search for terrorists and more nuclear weapons will ensue. The federal government's response plan should assume a multithreat scenario and a continuing state of crisis until it has been ascertained that the terrorists have used or surrendered all the weapons they are capable of delivering.

Much will depend on the public's cooperation and therefore on continuing leadership and communication from all levels of government. As one example, provisions such as the evacuation of children from some cities, their necessary support and school facilities, and essential hospital staff should be considered. England during World War II and other historical models may be useful here.

If one nuclear weapon goes off, more are likely to follow.

Searching for the second and third nuclear weapons without cues from intelligence, law enforcement, foreign governments, or the terrorists themselves would be extremely difficult. Uranium weapons emit little radiation, and plutonium weapons are easily shielded by a container of lead. The United States is developing and deploying a variety of radiation sensors at ports and airports and around sensitive landmarks and buildings. Although each sensor is limited in sensitivity and might have a high rate of false alarms because other items in normal commerce also emit radioactive signals, a well-designed sensor network consisting of detectors connected by communications and smart data processing has a better chance of detecting a nuclear weapon than an array of individual sensors.

The technical reality remains that even such networks by themselves will not give a high probability of detecting the location of follow-on nuclear weapons. At a minimum, however, they will pose a risk to terrorists that their plans for follow-on attacks will be detected and foiled. Additionally, such sensors have a much better chance (individually and collectively) of detecting "dirty bombs," which combine conventional explosives with radioactive material. Therefore, their deployment would have a dual purpose. The U.S. government should continue to deploy ever-improving radiation-detection sensor networks via the program coordinated by the DHS Domestic Nuclear Detection Office.

Retaliation and Deterrence

The source of the weapon or material detonated by a nongovernmental terrorist group will eventually be traced back to a government. Even the most sophisticated terrorist groups will not be able to enrich uranium or reprocess plutonium, and relatively few governments possess these materials. Some weeks after the nuclear weapon goes off or maybe sooner, the source of the

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weapon material will become known. Radiochemical forensic analysis of the weapon debris, ordinary police and intelligence work, and perhaps statements by the terrorists themselves will reveal the perpetrators and where they got the bomb-making material.

Although there will be a strong urge to punish the government responsible for the leak, on the day of the attack it will probably be more in the U.S. interest to seek its cooperation than to punish it unless the leakage was deliberate. It is unlikely that the leaders of Russia or Pakistan, for example, will have deliberately transferred fissile materials or nuclear weapons to terrorists. If they did so deliberately, retaliation would obviously be justified. The threat of such retaliation might in fact deter North Korea or, in the future, perhaps Iran from using terrorists as a way to deliver nuclear weapons to U.S. soil.

In the more likely case in which the nuclear weapon or material was stolen or bought from a government's stockpile without its knowledge, the United States will need the full cooperation of that government to find out how many more nuclear weapons the terrorists might have, where they are, and who the terrorists are. Threatening to attack the country that was unwittingly the source of the nuclear weapon will be an understandable but counterproductive urge on the part of a U.S. population angered and frightened by the first detonation.

Deterrence by threat of punishment, although a familiar concept that is comforting to many strategists, will therefore have utility if the government ultimately responsible for the bomb had acted knowingly and willfully. If North Korea sold fissile material or bombs to third parties, for example, it should be held accountable for the ultimate use of those ingredients of nuclear terrorism. The United States should make this clear to North Korea in advance.

Although deterrence through retaliation will play a limited role in most nuclear terrorism scenarios, the United States should have the capability to assure with a high degree of certainty and in a credible manner that it would eventually determine the source of the fissile material or nuclear weapons used against it. No government should believe it could attack the United States by using a terrorist group as a proxy and not be revealed and held accountable eventually. All governments should know that if they negligently permit theft or diversion of bombs or materials, they will be held accountable. Police and intelligence investigation could be powerfully augmented by radiochemical forensics, in which the debris from the detonation would be analyzed and compared to models of various U.S., Russian, Pakistani, and other nuclear-weapon compositions and designs.

Tracking down the exact source of the weapon, however, could take weeks of analysis under the best of circumstances and would be impossible unless others shared sensitive data about the design of all their weapons and the

composition of all their supplies of fissile materials.[5] Such data sharing is unlikely in advance of an attack, although it might suddenly become easier as these governments strive to show they are cooperating with an angry United States. Washington should seek to have the capability to attribute a nuclear detonation credibly and unambiguously to its source. It should state clearly as a matter of national policy that it will demand the cooperation of governments that might have been the source in proving or disproving their complicity. The United States should also state clearly that it reserves the right to retaliate against governments that knowingly transfer nuclear weapons or fissile materials to nongovernmental entities.

Preserving the Continuity of the U.S. Form of Government

Even in the terrible circumstances of a nuclear attack, the underlying situation would continue to be that of a handful of terrorists acting against everyone else. Contingency plans must tend to those affected, the people and cities not bombed, and above all the institutions and spirit of collective governance of the American people through the Constitution. This means preserving the continuity of constitutional government and the population's continued confidence that their government's response is well planned and competently executed. They will need to know that their government is doing its best to restore their security and well-being to what it was before the attack.

The physical security of the president and his or her successors should not be in doubt. The Constitution and law prescribes the chain of succession if the president is killed. Contingency plans for the continuity of government were in place during the Cold War to ensure retaliation to an attack by the Soviet Union and thus ensure deterrence of attack in the first place. These plans were amended in the early 1990s to encompass terrorist attacks on Washington and were further urgently updated after September 11, 2001, when the reality of terrorism suddenly became evident to all. The physical survival of all three branches of U.S. government is presumably therefore beyond doubt, although its mechanisms are necessarily secret.

It would be advisable to add two additional ingredients to the continuity of government plans for the uniquely destructive and frightening circumstances of a nuclear detonation on a U.S. city. First, plans should provide to make it true in fact and appearance that extraordinary measures taken to respond and to prevent follow-on detonations are the result of deliberation and balance among all three branches of government. For example, a council of the president, vice president, speaker of the House, and majority leader of the Senate with the chief justice of the Supreme Court as observer could be specified as a consultative body to determine important aspects of the government's

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response that touch law and the Constitution without in any way impeding existing and long-established authorities of the executive, legislative, and judicial branches. The resulting framework should be effective against terrorists and also be fair and seen as fair in the United States and throughout the world.

Second, contingency plans should stipulate that extraordinary measures taken to respond to a nuclear attack, even if taken through due constitutional and balance of powers mechanisms, are temporary, have a specified "sunset" date, and will be reviewed when the campaign of terror subsides or ends.

Well-considered contingency plans can save lives and promote recovery.

Thinking the Unthinkable

Through wise policies of prevention, this day may never come. Yet, the probability of nuclear terrorism, although it cannot be quantified, is not zero and is surely increasing as the number of sources of fissile material multiplies.

Although it is most important for first responders and members of the media who report on homeland security to have an understanding of the government's plans after an attack, a measure of public knowledge will be essential to the plan's acceptance and effectiveness. Some grasp of the considerations of sheltering versus evacuation, decontamination and resettlement, and what a nuclear detonation does and does not do will be needed in order for the public to follow the government's recommendations willingly. Above all, it will be vital to avoid panic and overreaction, which can do wider damage to national governance and international order, thus fulfilling the nuclear terrorists' objectives.

A serious risk requires serious and thoughtful contingency planning, however small or remote the probability may seem. Well-considered measures embedded in serious contingency plans can save lives and promote recovery. This contingency planning therefore deserves sober attention. The destruction of buildings and lives in the cities bombed could be accompanied by a wider destruction of the sense of safety and well-being of each and every citizen. Although thoughtful preparation in advance will not change a catastrophe into something less, it will nevertheless save thousands of lives and billions of dollars, prevent unnecessary panic, help maintain trust in the government, and help preserve democratic institutions in a time of emergency. Carefully considered action by government will also help the citizenry avoid overreaction and panic and allow them to restore the American way of life that they have built over centuries. Terrorists, even if armed with nuclear weapons, should never be allowed to take that away.

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Notes

1. See Sam Nunn, "The Day After an Attack: What Would We Wish We Had Done? Why Aren't We Doing It Now?" testimony before the 9/11 Public Discourse Project, June 27, 2005, http://www.nti.org/c_press/testimony_nunn911commission_062705.pdf.
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